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# **Q&A**

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**Exam** : **070-549**

**Title** : PRO:Design & Develop  
Enterprise Appl by Using  
MS.NET Frmwk

**Version** : Demo

1. You are an enterprise application developer. You are implementing a new component for an application. The component accesses a database to populate a list of customer objects and exposes a method that is named GetAllCustomers.

The component uses a design pattern to access the database only on an as-needed basis. A caching mechanism exists in a lower tier of the application architecture. The component must not cache data.

You need to implement the logic for populating a list of customer objects by using a database query. You also need to ensure that you meet the company guidelines for the component design pattern.

What should you do?

A. Execute a query in the constructor of the component to populate a field of type List(Of Customer). Return the List reference in the call to the GetAllCustomers method.

B. Execute a query in the static constructor of the component to populate a static field of type List(Of Customer). Return the List reference in the call to the GetAllCustomers method.

C. Execute a query in the GetAllCustomers method to populate a local variable of type List(Of Customer). Return the List reference.

D. Execute a query in the GetAllCustomers method to populate a field of type List(Of Customer) only if the field is null. Return the List reference.

**Answer: C**

2. You are an enterprise application developer. You create a component that exposes a Shared method.

The Shared method performs a complex business algorithm and the method must support concurrent callers. You use asynchronous processing to implement the method.

You need to ensure that the client application is notified about the completion of the method.

What should you do?

A. Add a Public Shared Event to the component and raise the event when processing is complete.

B. Pass a callback Delegate from the client application as a parameter to the processing method. Invoke the Delegate when processing is complete.

C. Add a Public Shared Property to the component and permit the client application to poll the component for completion.

D. Add a constructor that accepts a callback Delegate as parameter from the client application. Invoke the Delegate when processing is complete.

**Answer: B**

3. You are an enterprise application developer. You are creating a component that will be deployed as part of a class library. The component must meet the following specifications:

The interface of the component must be accessible to components outside the hosting assembly.

The interface of the component must be interoperable with components written in any other .NET Framework languages.

The implementation of the component cannot be expanded upon by a derived class.

You need to design the interface of the component.

Which three tasks should you perform? (Each correct answer presents part of the solution. Choose three.)

- A. Apply the CLSCompliant(True) attribute to the assembly and component definition.
- B. Apply the MustInherit keyword to the component definition.
- C. Apply the ComVisible(True) attribute to the assembly and component definition.
- D. Create a primary interop assembly for the assembly that hosts your component.
- E. Apply the NotInheritable keyword to the component definition.
- F. Apply the Public keyword to the component definition.

**Answer: A AND E AND F**

4. You are an enterprise application developer for Woodgrove Bank. You are creating an application to manage different loan types.

All loan types share a common implementation for interacting with the financial systems of Woodgrove.

Each loan type must implement its own rules for calculating interest. In the first version of the application, you must support car loans and house loans.

You need to develop an architecture for the different loan types within your application.

What should you do?

- A. Implement Loan as a MustInherit class. Implement CarLoan and HouseLoan as concrete classes.
- B. Implement Loan as an interface. Implement CarLoan and HouseLoan as concrete classes.
- C. Implement Loan as a concrete class. Implement CarLoan and HouseLoan as interfaces.
- D. Implement Loan as a NotInheritable class. Implement CarLoan and HouseLoan as abstract classes.

**Answer: A**

5. You are an enterprise application developer. You are creating a component that processes loan requests. Your component will be used inside Microsoft Windows Forms client applications.

The loan request form is complex and time consuming to complete. Loan data is saved to a Microsoft SQL Server 2005 database.

You need to ensure that in case of a system failure the loan officer does not need to re-enter any loan data.

What should you do?

A. Implement a Private Save method that saves all Property values to the database. Call the Save method from inside your components finalizer.

B. Implement code inside the Set accessor for each Property that saves the Property value to the database.

C. Implement a Public Save method that saves all Property values to a Shared variable.

D. Implement code inside the Set accessor that saves the Property value to a Shared variable.

**Answer: B**

6. You are an enterprise application developer. You are creating a component to process geospatial data.

The component retrieves large sets of data from a Microsoft SQL Server database. Each data point consists of two decimal values: one value represents longitude and the other value represents latitude.

You need to design a data format that minimizes the managed heap memory allocation needed for each data point within the component.

What should you do?

A. Design a custom class that contains Private fields for the longitude and the latitude, and design read-only Public properties for the longitude and the latitude.

B. Design an XML element that contains an attribute for each longitude value and each latitude value.

C. Design an ADO.NET DataRow class that contains DataColumnns for the longitude and latitude values.

D. Design a custom Structure that contains a Public field for the longitude value and a Public field for the latitude value.

**Answer: D**

7. You are an enterprise application developer. You create a Microsoft Windows client application that communicates with a business layer component.

The business layer component contains the following class, named Utility.

```
Public Class Utility
```

```
    Public Sub New()
```

```
    ...
```

```
    End Sub
```

```
    Public Sub ChangeData()
```

```
    ...
```

```
    End Sub
```

```
End Class
```

The application must fulfill the following criteria:

Instances of the Utility class must be created only within the business component.

The Windows client application must be able to invoke the methods inside the Utility class.

You review the code for the Utility class and decide it requires modification.

You need to recommend modifications for the code.

What should you recommend?

- A. Change the scope of the constructor to Private.
- B. Change the scope of the constructor to Friend.
- C. Change the scope of the Utility class to Private.
- D. Change the scope of the Utility class to Friend.

**Answer: B**

8. You are an enterprise application developer. You create a data access layer for an order processing application.

The data access layer meets the following criteria:

The data access layer contains a GetConnectionString method to retrieve and return the connection string for the database.

The data access layer contains a stored procedure named GetTotalOrderAmount.

The stored procedure runs a select query to return only the sum of the OrderAmount column for the active

orders. At times, there might be no active orders.

You create the following method to execute the stored procedure and return the total.

```
Public Function GetTotalOrderAmount() As Double
    Dim con As New SqlConnection(GetConnectionString())
    Dim sql As String = "GetTotalOrderAmount"
    Dim cmd As New SqlCommand(sql, con)
    Dim rd As IDataReader = cmd.ExecuteReader()
    Dim amt As Double = 0.0
    If rd.Read() Then
        amt = rd.GetDouble(0)
    End If
    rd.Close()
    con.Close()
    Return amt
End Function
```

You need to review the code and recommend modifications to simplify the code and improve performance, if necessary.

What should you conclude and recommend?

- A. The code does not need to be modified.
- B. The code needs to be modified. You must remove the condition that verifies whether the DataReader object returned any rows.
- C. The code needs to be modified. You must use a DataSet object instead of a DataReader object.
- D. The code needs to be modified. You must use the ExecuteScalar method instead of the ExecuteReader method.

**Answer: D**

9. You are an enterprise application developer. You are performing a peer code review for an entry-level developer. The developer is implementing server-side business objects.

The business objects must be accessed and activated by using .NET Framework remoting. In addition, the business objects must meet the following requirements:

Implement an interface for client-side access.

Inherit from a base business object class.

The developer writes the following code segment.

```
Public Class UserObject
    Inherits BaseBizObject, MarshalByRefObject
    Implements IUserObject
End Class
```

When the developer attempts to compile the code, an error message is received.

You need to review the code and recommend a solution.

What should you recommend?

- A. The class must derive from the MarshalByRefObject class. The UserObject class can access methods in the BaseBizObject class by creating an instance of the BaseBizObject class.
- B. The class must derive from the BaseBizObject class. The BaseBizObject class must derive from the MarshalByRefObject class.
- C. Change the approach so that the client computer accesses a wrapper class that derives from the MarshalByRefObject class.
- D. The class must derive from the MarshalByValue class instead of the MarshalByRefObject class.

**Answer: B**

10. You are an enterprise application developer. You are manipulating a collection of customer, product, and supplier objects.

The collection objects must fulfill the following requirements:

The objects must use custom sort methods on different properties of the respective classes.

The objects must be strongly typed.

A developer from your team decides to use the following collection classes.

```
Public MustInherit Class MyCollectionBase
    Inherits System.Collections.CollectionBase
    Public MustOverride Sub Sort()
End Class

Public Class CustomerCollection
```

```
Inherits MyCollectionBase
```

```
'Code overriding CollectionBase methods
```

```
Public Overrides Sub Sort()
```

```
    'Customer sorting method
```

```
End Sub
```

```
End Class
```

```
Public Class SupplierCollection
```

```
Inherits MyCollectionBase
```

```
'Code overriding CollectionBase methods
```

```
Public Overrides Sub Sort()
```

```
    'Supplier sorting method
```

```
End Sub
```

```
End Class
```

```
Public Class ProductCollection
```

```
Inherits MyCollectionBase
```

```
'Code overriding CollectionBase methods
```

```
Public Overrides Sub Sort()
```

```
    'Product sorting method
```

```
End Sub
```

```
End Class
```

You need to review the code and recommend improvements to simplify maintenance, if necessary.

What should you conclude and recommend?

- A. The code does not need to be modified.
- B. The code needs to be modified. The MyCollectionBase class must implement the ICollection interface instead of inheriting from the CollectionBase class.
- C. The code needs to be modified. Use List(Of T) class instead of creating custom collections.
- D. The code needs to be modified. The child collection classes must inherit from the CollectionBase class instead of the MyCollectionBase class.

**Answer: C**